

CLAIMS

1. A parts washer characterised by comprising:

a cleaning chamber;

a receptacle into which parts to be cleaned are placed, the receptacle being rotatably

5 mounted within the cleaning chamber;

a receptacle drive means arranged to rotate the receptacle; and

one or more spray manifolds, the or each spray manifold having a plurality of spray jets arranged to spray cleaning fluid onto the parts in the receptacle;

wherein the or each spray manifold is moveably mounted within the cleaning chamber

10 and is coupled to a spray manifold drive means such that the spray manifold drive means causes reciprocating motion of the or each spray manifold.

2. A parts washer in accordance with claim 1, characterised in that the spray manifolds comprise at least one horizontal spray manifold arranged to undergo reciprocal horizontal movement and to spray cleaning fluid in a generally vertical direction and at least one vertical spray manifold arranged to undergo reciprocal vertical motion and to spray cleaning fluid in a generally horizontal direction.

3. A parts washer in accordance with claim 2, characterised in that there is provided a first horizontal spray manifold located above the receptacle having spray jets directed downwardly toward the receptacle and a second horizontal spray 20 manifold located below the receptacle having spray jets directed upwardly toward the receptacle.

4. A parts washer in accordance with claim 3, characterised in that the first and second horizontal spray manifolds are connected adjacent first ends thereof to an

interconnecting manifold arranged to extend generally vertically between the first and second horizontal spray manifolds.

5. A parts washer in accordance with claim 4, characterised in that the interconnecting manifold is engaged by the spray manifold drive means so that the

5 interconnecting manifold undergoes rotational reciprocal motion about a longitudinal axis of the interconnecting manifold, thereby causing the first and second horizontal spray manifolds to undergo pivotal reciprocal motion in a generally horizontal plane.

6. A parts washer in accordance with claim 2, characterised in that a vertical spray manifold is provided, the vertical spray manifold being engaged by the spray

10 manifold drive means such that the vertical spray manifold undergoes reciprocal linear movement along a vertical axis.

7. A parts washer in accordance with any one of claims 1 to 6, characterised in that each of the spray jets sprays a solid, non-diverging stream of cleaning fluid.

8. A parts washer in accordance with claim 7, characterised in that the spray jets

15 on each of the spray manifold are directed to spray at varying angles in a single plane.

9. A parts washer in accordance with any one of claims 2 to 8, characterised in that the or each horizontal spray manifolds is provided with a plurality of spray jets at an outer end thereof.

10. A parts washer in accordance with any one of claims 2 to 9, wherein the or

20 each vertical spray manifold is provided with a plurality of spray jets at an upper end thereof and a plurality of spray jets at a lower end thereof.

11. A parts washer in accordance with any one of the preceding claims, characterised in that the spray manifold drive means and receptacle drive means are arranged such that after a single revolution of the receptacle, the spray manifolds will

have undergone a plurality of reciprocal movements and be in a position offset from the position of the spray manifolds at the commencement of said revolution.

12. A parts washer in accordance with any claims 4 to 11, characterised in that the spray manifold drive means comprises a motor arranged to drive a drive wheel and a

5 first cam member is provided connected between the drive wheel and the interconnecting manifold such that the rotation of the drive wheel causes the interconnecting manifold to undergo said rotational reciprocal motion.

13. A parts washer in accordance with claim 12, characterised in that an inlet manifold is provided, the inlet manifold being arranged generally vertically and being

10 connected to and in fluid communication with the interconnecting manifold, the first cam member being connected between the drive wheel and the inlet manifold.

14. A parts washer in accordance with claim 13, characterised in that the first cam member comprises a cam plate having a slot adjacent a first end to engage with an off-centre lug on the drive wheel and being connected at a second end thereof to the

15 inlet manifold.

15. A parts washer in accordance with claim 13 or 14, characterised in that a U-

shaped pipe is provided, the U-shaped pipe being rotatably connected between an elbow on the inlet manifold and an elbow on the vertical spray manifold such that the U-shaped pipe extends generally horizontally at ends thereof and a second cam

20 member being provided connecting between the drive wheel and the U-shaped pipe adjacent the inlet manifold such that rotation of the drive wheel causes the U-shaped pipe adjacent the inlet manifold to undergo reciprocal rotational movement about the longitudinal axis of U-shaped pipe adjacent the inlet manifold.

16. A parts washer in accordance with claim 15, characterised in that the second cam member comprises a cam rod connected at a first end thereof to the off centre lug on the drive wheel and pivotally at a second end thereof to a first transverse bracket on the U-shaped pipe adjacent the inlet manifold.

5 17. A parts washer in accordance with claim 16 wherein a first interconnecting member is provided, the first interconnecting member being pivotally connected between a second transverse bracket on the U-shaped pipe adjacent the inlet manifold and a third transverse bracket on the U-shaped pipe adjacent the vertical spray manifold such that rotation of the drive wheel causes the vertical spray manifold to  
10 undergo vertical linear reciprocal movement along the longitudinal axis of the vertical spray manifold.

18. A parts washer in accordance with any one of claims 4 to 17, characterised in that a second interconnecting member is provided, the second interconnecting member being pivotally connected between a fourth transverse bracket on the 15 interconnecting manifold and a fifth transverse bracket on the vertical spray manifold, such that the rotational reciprocal motion of the interconnecting manifold causes rotational reciprocal motion of the vertical spray manifold about the longitudinal axis of the vertical spray manifold.

19. A parts washer in accordance with any one of the preceding claims, 20 characterised in that the cleaning chamber comprises a cabinet having a lid moveable between an open position and a closed position.

20. A parts washer in accordance with any one of the preceding claims, characterised in that the receptacle comprises a basket mounted on a central drive shaft.